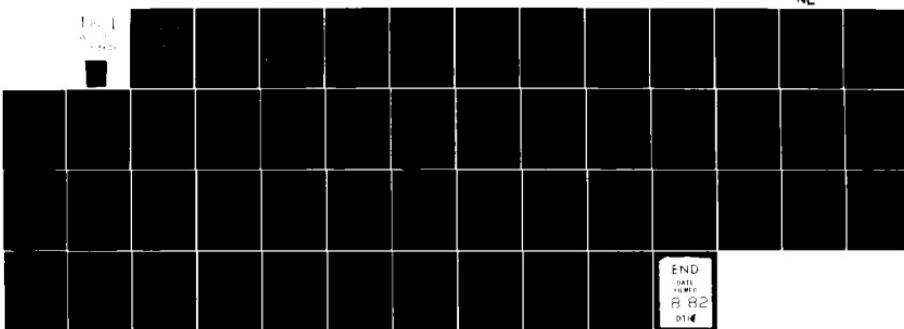


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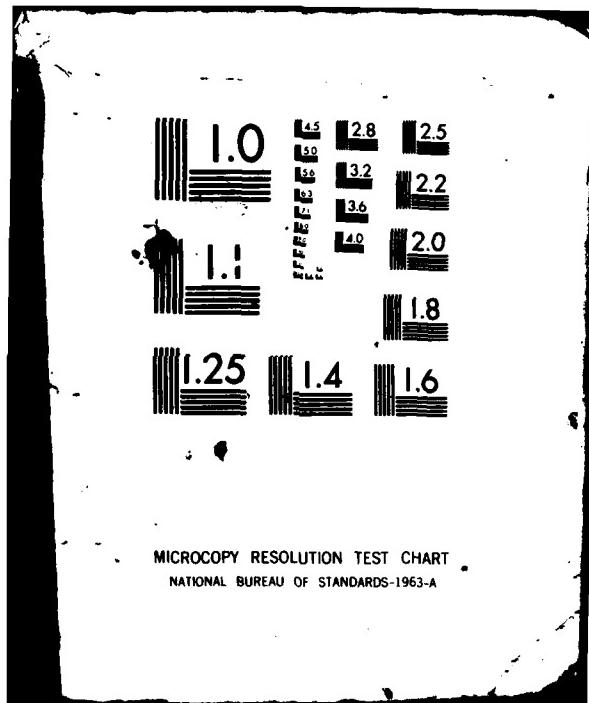
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**DEPARTMENT OF THE ARMY  
JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1983  
SUBMITTED TO CONGRESS**

**FEBRUARY 1982**



**PART 4 OF 7 PARTS  
(AMMUNITION)**

**PROCUREMENT**

**PROGRAMS**

**AIRCRAFT**

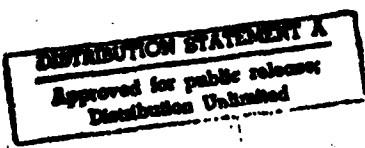
**MISSILES**

**WEAPONS & TRACKED COMBAT VEHICLES**

**AMMUNITION**

**OTHER**

**NATIONAL GUARD EQUIP**



**UNCLASSIFIED**

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) In justification of programs requested, this document, in separate volume for each of the five Procurement Appropriations, provides backup data for the Army Budget submission for FY 1983. Included are Summaries of Requirements, Program and Financing Statements and Selected Data Sheets. (This document has been declassified for NTIS distribution).		

February 1982

DEPARTMENT OF THE ARMY  
PROCUREMENT APPROPRIATIONS

JUSTIFICATION OF ESTIMATES FOR FISCAL YEARS 1983, 1984

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DEPARTMENT OF THE ARMY  
PROCUREMENT OF AMMUNITION, ARMY

JUSTIFICATION OF ESTIMATES FOR FISCAL YEARS 1983, 1984

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**PROCUREMENT OF AMMUNITION, ARMY**

**Section 1**

**Budget Appendix Extract**

**Language**

**Program and Financing Schedule**

**Object Classification Schedule**

**4-1 February 1982**

Procurement of Ammunition, Army

APPROPRIATION LANGUAGE

For construction, procurement, production, and modification of ammunition, and accessories therefor; specialized equipment and training devices; expansion of public and private plants, including ammunition facilities authorized in military construction authorization Acts or authorized by section 2673, title 10, United States Code, and the land necessary therefor, without regard to section 4774, title 10, United States Code, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title as required by section 355, Revised Statutes, as amended; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes; (\$2,381,900,000) \$2,633,384,000 to remain available for obligation(1) until September 30, (1984) 1985. (2)

(10 U.S.C. 2353, 3012, 4531, 4532; 31 U.S.C. 649c; Department of Defense Appropriation Act, 1979; additional authorizing legislation to be proposed.)

EXPLANATION OF LANGUAGE CHANGES

- (1) To change the amount of the appropriation requested for FY 1983.
- (2) To change the obligation expiration date for the FY 1983 program.

Army

## Procurement of Ammunition, Army

08 FEB 82

## Program and Financing (in thousands of dollars)

Identification code	21-2034-0-1-061	Budget plan (amounts for procurement actions programmed)			Obligations		
		1981 actual	1982 est.	1983 est.	1981 actual	1982 est.	1983 est.
<b>Program by activities:</b>							
	<b>Direct:</b>						
	1. Ammunition	1,211,800	1,090,600	2,205,600	1,175,630	1,762,053	2,190,781
	2. Ammunition production base support	346,800	311,800	433,384	349,573	249,264	399,318
	<b>Total direct</b>	<b>1,558,700</b>	<b>2,302,500</b>	<b>2,638,984</b>	<b>1,519,203</b>	<b>2,011,317</b>	<b>2,587,094</b>
	<b>Reimbursable program</b>	<b>572,724</b>	<b>58,700</b>	<b>139,100</b>	<b>603,011</b>	<b>164,437</b>	<b>161,622</b>
10.0001	<b>Total</b>	<b>2,131,424</b>	<b>2,361,200</b>	<b>2,778,084</b>	<b>2,022,214</b>	<b>2,176,754</b>	<b>2,710,616</b>
	<b>Financing:</b>						
	Offsetting collections from:						
11.0001	Federal funds	-432,303	-54,100	-134,800	-415,092	-54,100	-134,800
13.0001	Trust funds	-139,837	-9,200	-9,900	-132,682	-9,200	-9,900
14.0001	Non-federal sources	-484			-485		
17.0001	Recoveries of prior year obligations(-)				-17,482		
21.4001	Unobligated balance available, start of year: For completion of prior year budget plans				-321,610	-391,531	-878,977
21.4002	Reprogramming from or to prior year budget plan	-32,216				391,531	878,977
24.4001	Unobligated balance available, end of year				32,216	32,216	636,148
26.0001	Unobligated balance lapsing	-32,216					
39.0001	<b>Budget authority</b>	<b>1,558,700</b>	<b>2,297,900</b>	<b>2,639,384</b>	<b>1,558,700</b>	<b>2,297,900</b>	<b>2,639,384</b>
	<b>Budget authority:</b>						
40.0001	Appropriation	1,558,700	2,297,900	2,639,384	1,558,700	2,297,900	2,639,384
41.0001	Transferred to other accounts(-)		-64,000			-64,000	
43.0001	<b>Appropriation (adjusted)</b>	<b>1,558,700</b>	<b>2,297,900</b>	<b>2,639,384</b>	<b>1,558,700</b>	<b>2,297,900</b>	<b>2,639,384</b>
	<b>Relation of obligations to outlays:</b>						
71.0001	Obligations incurred, net				1,473,948	2,112,484	2,874,216
72.4001	Obligated balance, start of year				1,486,371	1,616,499	2,800,963
74.4001	Obligated balance, end of year				-1,616,499	-2,209,963	-2,772,963
77.0001	Adjustments in expired accounts				71,624		
78.0001	Adjustments in unexpired accounts				-17,482		
80.0001	<b>Outlays</b>	<b>1,367,900</b>	<b>1,825,000</b>	<b>2,000,000</b>			

Army

Procurement of Ammunition, Army

08 FEB 82

Object Classification (in thousands of dollars)

Identification code	21-2034-0-1-051	1981 actual	1982 est.	1983 est.
Direct obligations:				
Other services:				
125.004	Other	368,222	612,154	703,708
126.001	Supplies and materials	1,146,476	1,376,481	1,607,328
131.001	Equipment	4,506	22,672	26,063
188.001	Total direct obligations	1,519,203	2,011,917	2,037,064
Reimbursable obligations:				
Other services:				
225.004	Other	123,330	87,136	42,406
226.001	Supplies and materials	378,184	74,071	137,849
231.001	Equipment	1,509	3,228	1,871
288.001	Total reimbursable obligations	503,011	164,437	181,822
988.901	Total obligations	2,022,214	2,176,754	2,718,818

Procurement of Ammunition, Army

06 FEB 82

Program and Financing (in thousands of dollars)		Budget plan (amounts for procurement actions programmed)			1979 Fiscal year program		
Identification code	21-2034-0-1-051	1981 actual	1982 est.	1983 est.	1981 actual	1982 est.	1983 est.
<b>Program by activities:</b>					<b>Obligations</b>		
<b>Direct:</b>							
1. Ammunition					40,772		
2. Ammunition production base support					7,136		
<b>Total direct</b>					47,908		
<b>Reimbursable program</b>					11,985		
<b>10.0001</b>	<b>Total</b>				<b>59,893</b>		
<b>Financing:</b>							
<b>Offsetting collections from:</b>							
11.0001	Adjustment to prior year federal fund orders				19,360		
13.0001	Adjustment to prior year trust fund orders				4,664		
17.0001	Recoveries of prior year obligations(-)				-7,748		
21.4001	Unobligated balance available, start of year:				-106,377		
21.4002	For completion of prior year budget plans	-32,216					
28.0001	Reprogramming from or to prior year budget plan	32,216					
<b>40.0001</b>	<b>Budget authority</b>				<b>32,216</b>		

ARMY

## Procurement of Ammunition, Army

06 FEB 82

Identification code	21-2034-0-1-061	Program and Financing (in thousands of dollars)			1980 Fiscal year program		
		Budget plan (amounts for procurement actions programmed)			Obligations		
		1981 actual	1982 est.	1983 est.	1981 actual	1982 est.	1983 est.
<b>Program by activities:</b>							
<b>Direct:</b>							
1. Ammunition							
2. Ammunition production base support							
Total direct							
Reimbursable program							
<b>10.0001</b>	<b>Total</b>				<b>136,496</b>	<b>91,830</b>	
<b>Financing:</b>							
<b>Offsetting collections from:</b>							
11.0001 Adjustment to prior year federal fund orders							
13.0001 Adjustment to prior year trust fund orders							
14.0001 Adjustment to non-federal sources							
17.0001 Recoveries of prior year obligations(-)							
21.4001 Unobligated balance available, start of year							
24.4001 Unobligated balance available, end of year							
<b>40.0001</b>	<b>Budget authority</b>				<b>-2,139</b>	<b>2,661</b>	
					<b>-1</b>		
					<b>-9,736</b>		
					<b>-213,199</b>	<b>-68,969</b>	
					<b>68,969</b>		

ARMY

## Procurement of Ammunition, Army

08 FEB 82

Identification code	21-2034-0-1-081	Program and Financing (in thousands of dollars)			1981 Fiscal year program			
		Budget plan (amounts for procurement actions programmed)			Obligations			
		1981 actual	1982 est.	1983 est.	1981 actual	1982 est.	1983 est.	
<b>Program by activities:</b>								
<b>Direct:</b>								
1. Ammunition		1,211,900	.....	.....	1,072,420	83,821	86,969	
2. Ammunition production base support		346,600	.....	.....	331,675	7,562	7,563	
Total direct		1,558,700	.....	.....	1,404,095	91,383	93,532	
Reimbursable program		872,724	.....	.....	422,781	76,810	74,453	
10.0001    Total		8,191,424	.....	.....	1,826,866	136,893	167,978	
<b>Financing:</b>								
Offsetting collections from:								
Federal funds		-432,303	.....	.....	-432,303	.....	.....	
Trust funds		-138,937	.....	.....	-138,937	.....	.....	
Non-federal sources		-484	.....	.....	-484	.....	.....	
21.4001 Unobligated balance available, start of year		.....	.....	.....	.....	-304,068	-167,978	
24.4001 Unobligated balance available, end of year		.....	.....	.....	.....	304,566	167,978	
40.0001    Budget authority		1,558,700	.....	.....	1,558,700	.....	.....	

Procurement of Ammunition, Army

08 FEB 82

Identification code	Program and Financing (in thousands of dollars)			1982 Fiscal year program		
	Budget plan (amounts for procurement actions programmed)			Obligations		
	1981 actual	1982 est.	1983 est.	1981 actual	1982 est.	1983 est.
<b>Program by activities:</b>						
<b>Direct:</b>						
1. Ammunition	1,990,600			1,676,802	222,174	
2. Ammunition production base support	311,800			234,226	31,042	
Total direct	2,302,500			1,911,128	253,216	
Reimbursable program	68,700			41,070	9,998	
<b>10.0001 Total</b>	<b>2,371,200</b>			<b>1,952,198</b>	<b>263,216</b>	
<b>Financing:</b>						
Offsetting collections from:						
Federal funds	-84,100			-84,100		
Trust funds	-8,200			-8,200		
Unobligated balance available, start of year					-408,002	
Unobligated balance available, end of year				408,002	148,767	
<b>38.0001 Budget authority</b>	<b>2,297,900</b>			<b>2,297,900</b>		
Budget authority:						
Appropriation	2,361,900			2,361,900		
Transferred to other accounts(-)	-84,000			-84,000		
<b>43.0001 Appropriation (adjusted)</b>	<b>2,297,900</b>			<b>2,297,900</b>		

Procurement of Ammunition, Army

08 FEB 82

Program and Financing (in thousands of dollars)		1982 Fiscal year program		
Identification code	21-2034-0-1-051	Budget plan (amounts for procurement actions programmed)		Obligations
		1981 actual	1982 est.	1982 est.
<b>Program by activities:</b>				
<b>Direct:</b>				
1. Ammunition		2,205,600		1,830,848
2. Ammunition production base support		439,384		358,708
Total direct		2,639,984		2,189,556
Reimbursable program		139,100		87,370
<b>10.0001 Total</b>		2,778,084		2,277,726
<b>Financing:</b>				
<b>Offsetting collections from:</b>				
11.0001 Federal funds		-134,800		-134,800
13.0001 Trust funds		-9,900		-9,900
24.4001 Unobligated balance available, end of year				490,386
<b>40.0001 Budget authority</b>		2,639,384		2,639,384

**PROCUREMENT OF AMMUNITION, ARMY**

**Section 2**

**Introductory Statement**

**4-10 February 1982**

**PROCUREMENT OF AMMUNITION, ARMY**

**Section 3**

**Summary of Requirements**

**4-12 February 1982**

DEPARTMENT OF THE ARMY  
ANNUAL BUDGET ESTIMATES

Appropriation:	PROCUREMENT OF AMMUNITION, ARMY	FY 1983 Budget
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Section 2 - INTRODUCTORY STATEMENT

This appropriation finances the acquisition of ammunition, modification of inservice stock, and related production base support including the maintenance, expansion, and modernization of industrial facilities and equipment.

The 1983 program provides for worldwide training consumption and losses from inventory through the 1983 funded delivery period; procurement of modern hardware; and buildup of war reserve stocks to meet authorized acquisition objectives. This year's program includes funds for over 50 different types of ammunition and provides the 15th increment of a multi-year effort to rehabilitate and improve the Army's industrial base.

The 1984 program continues the procurement of ammunition through the 1984 funded delivery period and continues the effort to improve the ammunition production facilities.

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)		
Appropriation:		FY1984 Authorization Estimate
	PROCUREMENT OF AMMUNITION, ARMY	
Ammunition .....	.....	2,620,065
Ammunition Production Base Support .....	.....	404,000
TOTAL DIRECT PROGRAM .....	.....	3,024,065

4-14 February 1982

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)			
Appropriations	FY 1981 Actual	FY 1981 Estimate	FY 1981 Estimate
PROCUREMENT OF AMMUNITION, ARMY			
Ammunition .....	1,211,900	1,990,600	2,205,600
Ammunition Production Base Support .....	346,800	311,900	433,384
Total Direct Program .....	1,558,700	2,302,500	2,638,984
Reimbursable Program .....	572,724	58,700	139,100
 TOTAL PROGRAM REQUIREMENTS .....	2,131,424	2,361,200	2,778,084
 Less: Portion of program to be obligated in subsequent fiscal years .....	304,568	409,602	490,358
Plus: Obligations incurred against prior year program funds .....	195,358	223,556	431,190
 TOTAL OBLIGATIONS .....	2,022,214	2,175,754	2,718,916

4-13 February 1982

**PROCUREMENT OF AMMUNITION, ARMY**

**Section 4**

**Budget Activity Justification**

**Activity 1 - Ammunition**

**Activity 2 - Ammunition Production Base Support**

**4-15      February 1982**

Department of the Army Annual Budget Estimate <u>JUSTIFICATION</u>	Appropriation		FY1983 Budget	
	PROCUREMENT OF AMMUNITION, ARMY			
	(Thousands of Dollars)			
Budget Program	Actual	Estimate	Estimate	
ACTIVITY 1 - AMMUNITION	FY 1981	FY 1982	FY 1983	
Direct Budget Plan	\$1,211,900	\$1,990,600	\$2,205,600	

PURPOSE AND SCOPE

Ammunition. The FY1983 request provides for worldwide training consumption, improvements in near term readiness and in combat sustainability, and the acquisition of U.S. war reserve stocks for use during wartime. Family of munitions included in the request are artillery, mortar, tank, and small arms ammunition, rockets, fuzes, demolitions, grenades, pyrotechnic signals, and other ammunition items. The major portion of the funds being requested are identified to newly developed tank rounds, artillery munitions, and small arms ammunition.

JUSTIFICATION OF FUNDS REQUESTED

The fiscal year 1983 program provides for worldwide training consumption and losses to inventory through the FY1983 funded delivery period; increases US Army readiness in support of the FY1987 authorized acquisition objective and maintains an active ammunition production base in FY1983 for modernization and training type munitions. The FY1983 program includes over 50 different types of ammunition with the following category breakout: tank ammunition, \$219.0 million; fuses, \$108.0 million; artillery ammunition, \$818.2 million; propelling charges, \$89.9 million; small arms ammunition, \$502.7 million; mortar ammunition, \$106.9 million; nuclear projectile and support materiel, \$22.6 million; rockets, \$178.8 million; and other ammunition, spares and components for tests, renovation and proveout, \$159.5 million. Of the \$2,205.6 million total for ammunition hardware, \$1,235.1 million is allocated to tank gun and artillery munitions and their related fuses and propelling charges..

Department of the Army Annual Budget Estimate <b>JUSTIFICATION</b>	<b>Appropriation</b> <b>PROCUREMENT OF AMMUNITION, ARMY</b> (Thousands of Dollars)	FY 1983
		Budget
<b>Budget Program</b>		
<b>ACTIVITY 1 - AMMUNITION</b>		<b>Estimate</b>
<b>Direct Budget Plan</b>		<b>FY 1984</b>
		\$2,620,065

PURPOSE AND SCOPE

Ammunition. The FY 1984 program continues to provide for worldwide training consumption, improvements in near term readiness and in combat sustainability, and the acquisition of U.S. war reserve stocks for use during wartime.

JUSTIFICATION OF FUNDS REQUESTED

The fiscal year 1984 program provides for worldwide training consumption and losses to inventory through the FY 1984 funded delivery period; increases US Army readiness in support of the FY 1987 authorized acquisition objective and maintains an active ammunition production base in FY 1984 for modernization and training type munitions. The FY 1984 program includes over 50 different types of ammunition with the following category breakout: tank ammunition, \$363.7 million; fuses, \$132.1 million; artillery ammunition, \$916.6 million; propelling charges, \$126.0 million; small arms ammunition, \$469.7 million; mortar ammunition, \$174.6 million; nuclear projectile and materiel, \$76.6 million; rockets, \$166.2 million; and other ammunition, spares and components for tests, renovation and proveout, \$194.6 million. Of the \$2,620.1 million total for ammunition hardware, \$1,538.4 million is allocated to tank gun and artillery munitions and their related fuses and propelling charges.

Department of the Army Annual Budget Estimate <u>JUSTIFICATION</u>	Appropriation		FY 1983 <u>Budget</u>
	Procurement of Ammunition, Army (Thousands of Dollars)		
<u>Budget Program</u> Activity 2 - Production Base Support	Actual	Estimate	Estimate
	FY 1981	FY 1982	FY 1983
Direct Budget Plan	\$346,800	\$311,900	\$433,384

PURPOSE AND SCOPE

**AMMUNITION PRODUCTION BASE SUPPORT.** The FY83 program provides for the support of plants in active production and the modernization and expansion of production capability for ammunition; layaway of industrial plants and equipment; and the manufacturing technology to facilitate and improve the production of ammunition.

JUSTIFICATION OF FUNDS REQUESTED

The major effort for the ammunition production base in FY1983 is the modernization and expansion program. The FY1983 modernization and expansion program of \$358.2 million (including construction) is the fifteenth year of a long range, multi-billion dollar capital investment program which seeks to modernize existing World War II facilities which are deteriorated, obsolete, and inefficient, and to expand the base, where required, to provide the production capability to produce new, modernized ammunition items. The principal thrust of the program in FY1983 is the establishment of production base capability to produce new and more effective modernized ammunition items. New production capability is being established or expanded for 105/120mm Tank Ammunition, for GATOM and GMSS, members of the Family of Scatterable Munitions (FASCM); the LBA1 Red Phosphorus Smoke Grenade and 2.75 inch rocket. These projects are needed to permit the introduction of these modernized ammunition items into the DoD inventory with the resultant increase in the readiness and effectiveness of our combat forces. A detailed breakout of individual projects is provided in Section 6 beginning on page 4-33.

The FY1983 program provides for the continuation of prior year initiatives. A total of \$15.6 million is requested to complete the Mississippi Army Ammunition Plant at Bay St. Louis, MS. This provides additional funding to accommodate unforeseen cost increases, changes and inflation in the project. Mississippi AAP, when complete, will be capable of producing 120,000 rounds per month of the 155mm, M683 Improved Conventional Munition (ICM). Also continuing prior year initiatives are the restoration of the Ammonia Oxidation Plant at Sunflower AAP, and expansion of the initial production facilities for the antitank cluster munitions and tactical munitions dispenser metal parts. In the area of new initiatives there are seven projects totalling \$121.1 million to provide facilities for the core, projectile metal parts, cartridge case, stub base and load, assemble and pack for 105/120mm tank ammunition. Two FASCM projects totalling \$17.3 million provide facilities for manufacturing extended tripwire sensors and the load, assemble and pack of

Department of the Army Annual Budget Estimate JUSTIFICATION		FY1983 Budget
Appropriation	Budget Program	
Procurement of Ammunition, Army	Activity 2 - Production Readiness	

the GATOR. In addition the projects expand the Modular Pack Mine System (MOPMS) dispenser facility, the high energy density battery and the MOPMS antipersonnel mine assembly facilities. A 2.75 inch rocket project in the amount of \$1.7 million provides facilities for the manufacture of the rocket motor grains. The L8A1 Red Phosphorus Smoke Grenade project in the amount of \$2.3 million provides for the mix preparation and load, assemble and pack of the grenade. The GATOR facility is being requested by the Army as Single Service Manager for Conventional Munitions in support of Air Force and Navy planned procurements.

Other major efforts are a \$3.6 million project to eliminate a short fall of electrical power at Indiana AAP; a \$5.6 million project to rehabilitate a 1941 vintage boiler facility at Milan AAP; an \$8.2 million project to correct safety deficiencies on T-1 lines at Volunteer AAP; a \$4.1 million project to fill voids on SCANP line 3 at Lake AAP; a \$3.1 million safety project for environmental control systems at four installations to minimize static electricity in pyrotechnic areas; two projects (\$3.0 million at KDI Corporation and \$2.8 million at Hamilton Technology) to modernize fuse production facilities; \$8.1 million project to provide equipment to produce a threaded base for the M509A1 projectile at commercial facilities; \$2.3 million project to provide semi-automated equipment for 60/81mm ignition cartridges at Milan AAP; \$7.4 million for a consolidated plant operations center to replace 11 World War II buildings at Kansas AAP; \$3.3 million for long lead time equipment modernization of nitric acid support facilities at Holston AAP for RDX/HMX production; \$4.5 million for a hybrid amplifier facility to balance H734 fuse capability; a \$3.1 million facility at Louisiana for containerized shipment of ammunition, and a \$35.5 million design effort for out-year projects.

Also included in the FY1983 request are funds for the necessary production support and equipment replacement for plants in active production (\$33.6 million); the layaway of industrial plant equipment and facilities needed to meet mobilization production requirements (\$17.2 million); and a manufacturing technology program to incorporate the latest state-of-art production of ammunition (\$24.4 million). It is expected that thirteen ammunition plants will require production support and equipment replacement funds in FY1983. Five facilities, Pine Bluff Arsenal, McAlester AAP, Harry Diamond Laboratories, Crane AAP and ARRADCOM, will not require funding for production support and equipment replacement within Procurement of Ammunition, Army Appropriations but will be supported by the Army Industrial Funds at those installations. The \$17.2 million requested for layaway is for the protection and preservation of equipment and facilities no longer required for active production but which must be retained for future peacetime or mobilization

Department of the Army Annual Budget Estimate JUSTIFICATION		FY 1983 Budget
> Appropriation Procurement of Ammunition, Army	Budget Program Activity 2 - "Production Base Support	

production. The \$24.4 million for Manufacturing Methods and Technology (MM&T) is associated with the modernization and expansion program. This program improves on-going production processes to achieve cost reductions and enhanced health, safety, and energy conservation characteristics. Additionally, this program develops production processes incorporating the latest state-of-art technology from private industry to mass produce the new and more sophisticated munitions. A breakout of associated costs for the total production base program is reflected on page 4-21.

The construction portions of the individual projects are shown in parenthesis in Section 6, pages 4-34 through 4-43. A detailed breakout of the projects with construction begins on page 4-22. Included in this year's ammunition procurement request is \$25.7 million of construction which will require authorization in the FY1983 Military Construction Authorization Bill. This authorization total does not contain any authorization for the new Mississippi Army Ammunition Plant since construction of this plant was authorized by Congress in FY1978.

Depot Maintenance Plant Equipment will be supported by the Army Industrial Fund beginning in Fiscal Year 1983.

Department of the Army  
Annual Budget Estimate  
JUSTIFICATION

		FY 1983 <u>Budget</u>
<u>Appropriation</u> Procurement of Ammunition, Army	Budget Program Activity 2 - Production Base Support	
	<u>FY81</u> (Millions)	<u>FY82</u> (Millions)
<u>Provision of Industrial Facilities (PIF)</u>	299.5	241.4
Production Support and Equipment Replacement (PS&ER)	(32.0)	(37.8)
Initial Production Facilities (IPF)	(33.9)	(101.8)
Modernization (MOD)	(22.6)	(53.4)
Expansion (EXP)	(211.0)	(48.4)
<u>Layaway of Industrial Facilities</u>	16.6	29.7
<u>Manufacturing Technology Program</u>	20.7	30.5
<u>Military Adaptation of Commercial Items</u>	.8	24.4
<u>Depot Maintenance Plant Equipment</u>	9.2	10.3
<b>TOTAL PBS AMMUNITION</b>	<b>346.8</b>	<b>311.9</b>
		<b>433.4</b>

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Department of the Army Annual Budget Estimate JUSTIFICATION		FY 1983 Budget
Appropriation Procurement of Ammunition, Army		

Authorization of construction required to support ammunition production base projects in the FY1983 program is valued at \$25.7 million. Starting in FY1977 this military construction is authorized in the Military Construction Authorization Bill and appropriated in the Ammunition Procurement Appropriation. The Congress authorized construction in the amount of \$13.7 million in FY1981 and \$49.0 million in FY1982 for this program. Military Construction Project Data (DD Form 1391) which provide detailed project information, is published under separate cover. A listing of FY1983 construction projects is as follows:

Army Ammunition Plants (AAP)	Project No.	Project Title	PIF Const Cost PS&ER Estimate (Millions) MOD/EXP	PIF Equipment Cost (Millions)	Total Project Cost (Millions)
Indiana AAP	5835330-14	Emergency Power Source for Operating Lines	.3		.3
Iowa AAP	5832060	Power Tie Line		2.6	1.0
	5835333-14	Explosive Storage Building	.3		3.6
	5834333-16	Truck Dock and Storage Area	.1		.1
	5835333-18	Improve T-Barricade at Rail Dock	.6		.6
Kansas AAP	5833605	Plant Consolidated Operations Center Administration Building		7.2	7.3
Longhorn, TX, AAP	5835327-16	Improved Modify Chemical Labor- atory		.1	.2
Louisiana AAP	5835314-13	Waterwell Buildings	.1		.1
	5834314-18	Gasoline and Diesel Dispensing Station	.2		.2
	5833107	Container Distribution Facility		3.1	3.2
Milan, TN, AAP	5832109	Rehabilitation of K-10 Boiler Facility		5.5	5.6

Department of the Army Annual Budget Estimate <u>JUSTIFICATION</u>		FY 1983 Budget
Appropriation Procurement of Ammunition, Army	Budget Program Activity 2 - Production Base Support	

<u>Army Ammunition Plants (AAP)</u>	<u>Project No.</u>	<u>Project Title</u>	<u>PIF Const Cost Estimate (Millions) PS&amp;ER</u>	<u>PIF Equipment Cost (Millions)</u>	<u>Total Project Cost (Millions)</u>
Redford, VA, AAP	5835326-16 5832229	Replace Barricades 120mm Propellant Paste Aging Facility	1.9 .6	1.4	1.9 2.0
Sunflower, KS, AAP	5832380	Restore 300T/D Ammonia Oxidation Plant-Phase II	3.0	1.2	4.2
		TOTAL	3.7	3.9	29.6
		Grand Total (Construction)	\$25.7 million		

4-23 February 1982

Department of the Army Annual Budget Estimate <u>JUSTIFICATION</u>	Appropriation	FY 1983
	Procurement of Ammunition, Army (Thousands of Dollars)	Budget
Budget Program		
Activity 2 - Production Base Support		<u>Estimate</u>
Direct Budget Plan		FY 1984
		\$404,000

PURPOSE AND SCOPE

**AMMUNITION PRODUCTION BASE SUPPORT.** The FY1984 program provides for the support of plants in active production and the modernization and expansion of production capability for ammunition; layaway of industrial plants and equipment; and the manufacturing technology to facilitate and improve the production of ammunition.

JUSTIFICATION OF FUNDS REQUESTED

The major effort for the ammunition production base in FY1984 is the modernization and expansion program. The FY1984 modernization and expansion program of \$329.5 million (including construction) is the sixteenth year of a long range, multi-billion dollar capital investment program which seeks to modernize existing World War II facilities which are deteriorated, obsolete, and inefficient, and to expand the base, where required, to provide the production capability to produce new modernized ammunition items. The principal thrust of the program in FY1984 is the establishment of production base capability to produce the new and more effective modernized ammunition items. Production capability is being established or expanded for 105/120mm Tank Ammunition (\$113.1 million); GATOR and NOPHS mines (\$6.3 million); stick propellant for 155mm artillery ammunition (\$2.6 million); Bigeye Bomb (\$43.5 million); PMU 1398 Fuze (\$7.4 million); Low Vulnerability (LOVA) propellant for 105mm Tank Ammunition (\$2.1 million) and 16 inch ammunition for Navy (\$20.0 million). These projects are needed to permit the introduction of these modernized ammunition items into the DoD inventory with the resultant increase in the readiness and effectiveness of our combat forces. A detailed breakout of individual projects is provided in Section 6.

Other major efforts are two projects (\$2.8 million) to automate 60mm and 81mm mortar horseshoe increment container facilities in the commercial sector; \$45.9 million to modernize the continuous nitrocellulose unit at Sunflower AAP; \$6.8 million for automatic inspection of 155mm RAP round; \$1.2 million for nitric acid modernization at Holston AAP; and a \$33.9 million design effort for out year projects.

Department of the Army Annual Budget Estimate JUSTIFICATION		FY 1983 Budget
Appropriation Procurement of Ammunition, Army	Budget Program Activity 2 - Production Base Support	

Also included in this FY1984 request are funds for the necessary production support and equipment replacement for plants in active production (\$31.3 million); the layaway of industrial plant equipment and facilities needed to meet mobilization requirements (\$17.7 million); and a manufacturing technology program to incorporate the latest state-of-the-art technology into the production of ammunition (\$25.5 million). The \$17.7 million requested for layaway is for protection and preservation of equipment and facilities no longer required for active production but which must be retained for future peacetime or mobilization production. The \$25.5 million for manufacturing methods and technology (MM&T) is associated with the modernization and expansion program. This program improves on-going production processes to achieve cost reductions and enhanced health, safety, and energy conservation characteristics. Additionally, this program develops production processes incorporating the latest state-of-the-art technology from private industry to mass produce the new, more sophisticated munitions. A breakout of associated costs for the total production base program is reflected on page 4-26.

It is estimated that approximately \$45.0 million of construction will require authorization in the FY1984 Military Construction Authorization Bill.

Department of the Army Annual Budget Estimate <u>JUSTIFICATION</u>		FY 1983 Budget
Appropriation Procurement of Ammunition, Army	Budget Program Activity 2 - Production Base Support	

	<u>FY84</u> (Million)
<u>Provision of Industrial Facilities (PIF)</u>	360.8
Production Support and Equipment Replacement (PS&ER)	(31.3)
Initial Production Facilities (IPF)	(96.5)
Modernization (MOD)	(73.9)
Expansion (EXP)	(159.1)
<u>Layaway of Industrial Facilities</u>	17.7
<u>Manufacturing Technology Program</u>	25.5
<b>TOTAL PBS AMMUNITION</b>	<b>404.0</b>

**PROCUREMENT OF AMMUNITION, ARMY**

**Section 5**

**Comparison of Program Requirements and Financing**

Comparison of FY1982 program requirements as reflected in FY1982 budget with FY1982 program requirements as shown in FY1983 budget.

Comparison of FY1982 financing as reflected in FY1982 budget with FY1982 financing as shown in FY1983 budget.

Comparison of FY1981 program requirements as reflected in FY1982 budget with FY1981 program requirements as shown in FY1983 budget.

Comparison of FY1981 financing as reflected in FY1982 budget with FY1981 financing as shown in FY1983 budget.

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**COMPARISON OF FY 1982 PROGRAM REQUIREMENTS  
AS REFLECTED IN FY 1982 BUDGET WITH  
FY 1982 PROGRAM REQUIREMENTS AS SHOWN IN FY 1983 BUDGET**

<b>Appropriation:</b>	<b>SUMMARY OF REQUIREMENTS (In Thousands of Dollars)</b>		
	<b>Total Program Requirements Per FY 82 Budget</b>	<b>Program Requirements Per FY 1983 Budget</b>	<b>Increase (+) or Decrease (-)</b>
<b>Procurement of Ammunition, Army</b>			
Activity 1 - Ammunition	1,973,100	1,990,600	+17,500
Activity 2 - Ammunition Production Base Support	<u>309,400</u>	<u>311,900</u>	+ 2,500
Total	2,282,500	2,302,500	+20,000

**Explanation by Activity**

**Activity 1 - Ammunition.** The \$17.5 million increase is the net result of Congressional addition of \$99.4 million in the FY 1982 appropriation; a reduction of \$79.4 million due to revised price escalation estimates; and a reduction of \$2.5 million reprogrammed to Activity 2.

**Activity 2 - Ammunition Production Base Support.** The increase is the result of reprogramming within delegated authority.

COMPARISON OF FY 1982 FINANCING AS REFLECTED  
IN THE FY 1982 BUDGET WITH FY 1982 FINANCING:  
AS SHOWN IN FY 1983 BUDGET

<u>Appropriation:</u>	(In Thousands of Dollars)		
	Financing Per FY 1982 Budget	Financing Per FY 1983 Budget	Increase (+) or Decrease (-)
<u>Procurement of Ammunition, Army</u>			
Program Requirements (Total)	2,400,400	2,361,200	-39,200
Program Requirements (Service Account)	(2,282,500)	(2,302,500)	(+20,000)
Program Requirements (Reimbursable)	(117,900)	(58,700)	(-59,200)
Less:			
Anticipated reimbursements	117,900	63,300	(-54,600)
Reprogramming from prior year budget plans	-0-	-0-	
Unobligated balance available from prior year to finance new budget plans	-0-	-0-	
Unobligated balance transferred from other accounts	-0-	84,000	
Add:			
Unobligated balance transferred to other accounts	-0-	84,000	
Unobligated balance available to finance subsequent year budget plans	-0-	-0-	
<u>BUDGET AUTHORITY</u>	<u>2,282,500</u>	<u>2,297,900</u>	<u>+15,400</u>
<u>Appropriation</u>	<u>2,282,500</u>	<u>2,297,900</u>	<u>+15,400</u>

EXPLANATION OF CHANGES IN FINANCING

The fiscal year 1982 program has decreased by \$39,200 thousand since the FY 1982 budget request was presented to the Congress.  
This decrease is due to the following:

4-29 February 1982

EXPLANATION OF CHANGES IN FINANCING CONT'D

Anticipated Reimbursements: Estimated sales of ammunition to customers, including foreign countries, is reduced by \$54,600 thousand to reflect current program execution plans. The anticipated reimbursements include \$4,600 thousand, which is generated by non-FMS sales of items from stock which do not require replacement, and is available to finance direct Army programs.

Budget Authority is increased by \$15,400 thousand due to Congressional program increases of \$99,400 thousand and a transfer of \$84,000 thousand to other accounts.

COMPARISON OF FY 1981 PROGRAM REQUIREMENTS  
AS REFLECTED IN FY 1982 BUDGET WITH  
FY 1981 PROGRAM REQUIREMENTS AS SHOWN IN FY 1983 BUDGET

Appropriation:	SUMMARY OF REQUIREMENTS (In Thousands of Dollars)		
	Program Requirements Per FY 82 Budget	Program Requirements Per FY 83 Budget	Increase (+) or Decrease (-)
Procurement of Ammunition, Army			
Activity 1 - Ammunition	1,222,900	1,211,900	-11,000
Activity 2 - Ammunition Production	346,800	346,800	-
Base Support			
	1,569,700	1,558,700	-11,000

EXPLANATION BY ACTIVITY

Activity 1 - Ammunition. The decrease is the result of final Congressional action on the FY1981 Supplemental Appropriation (PL97-12).

**COMPARISON OF FY 1981 FINANCING AS REFLECTED  
IN THE FY 1982 BUDGET WITH FY 1981 FINANCING**

**AS SHOWN IN FY 1983 BUDGET (In Thousands of Dollars)**

<u>Appropriation:</u>	<u>Financing Per FY 1982 Budget</u>	<u>Financing Per FY 1983 Budget</u>	<u>Increase (+) or Decrease (-)</u>
<u>Procurement of Ammunition, Army</u>			
Program Requirements, (Total)	2,117,700	2,131,424	+13,724
Program Requirements (Service Account)	(1,569,700)	(1,558,700)	(-11,000)
Program Requirements (Reimbursable)	(548,000)	(572,724)	(+24,724)
<u>Less:</u>			
Anticipated reimbursements	548,000	572,724	24,724
Reprogramming from prior year budget plans	-0-	-0-	-0-
Unobligated balance available from prior year to finance new budget plans	-0-	-0-	-0-
Unobligated balance transferred from other accounts	-0-	-0-	-0-
<u>Add:</u> Unobligated balance transferred to other accounts	-0-	-0-	-0-
Unobligated balance available to finance subsequent year budget plans	-0-	-0-	-0-
<b>BUDGET AUTHORITY</b>	<b>1,569,700</b>	<b>1,558,700</b>	<b>-11,000</b>
<b>BUDGET AUTHORITY</b>	<b>1,569,700</b>	<b>1,558,700</b>	<b>-11,000</b>
<b>Appropriation</b>			

**EXPLANATION OF CHANGES IN FINANCING**

The total program for fiscal year 1981 has increased by \$13,724 thousand subsequent to the FY 1982 budget presentation to Congress. This increase is attributed to the following:

Anticipated Reimbursements: \$24,724 thousand increase reflects actual sales of munitions to foreign countries and other non-U.S. Army Customers.

Budget Authority: The decrease of \$11,000 thousand is the result of final Congressional action on the FY 1981 Appropriation (P.L. 97-12).

**PROCUREMENT OF AMMUNITION, ARMY**

**Section 6**

**Selected Data Sheets**

**4-33 February 1982**

PROCUREMENT OF AMMUNITION, ARMY  
PRODUCTION BASE SUPPORT  
 (\$ in Millions)

Service: Army

P-1 Line Item: Provision of Industrial Facilities

Projects:

<u>Annual Support</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>
5815347 - McAlester AAP: SPT - Pdn Spt and Equip Replacement	1.5			
5838252 - Pine Bluff Ars: SPT - Pdn Spt & Equip Replacement	1.1	1.3		
5834806 - ARRADECOM: SPT - Pdn Spt & Equip Replacement		1.0		
5835060 - Jefferson Prvg Crd: SPT - Pdn Spt & Replacement	1.8	2.9	1.5	1.3
5835314 - Louisiana AAP: SPT - Pdn Spt & Equip Replacement			1.2(.3)	
5835316 - Lone Star AAP: SPT - Pdn Spt & Equip Replacement	2.8	1.7	2.1	1.7
5835317 - Milan AAP: SPT - Pdn Spt & Equip Replacement	1.6	2.7	1.3	1.7
5835326 - Radford AAP: SPT - Pdn Spt & Equip Replacement	5.9	5.1	6.6(1.9)	5.5
5835327 - Longhorn AAP: SPT - Pdn Spt & Equip Replacement	2.0	1.3	3.6(.2)	1.6

PROCUREMENT OF AMMUNITION, ARMY  
PRODUCTION BASE SUPPORT  
(\$ in Millions)

<u>Projects</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>
Annual Support, Continued				
5835328 - Holston AAP: SPT - Pdn Spt & Equip Replacement	2.0	3.8	1.6	2.0
5835329 - Kansas AAP: SPT - Pdn Spt & Equip Replacement	1.7	3.6	1.8	1.8
5835330 - Indiana AAP: SPT - Pdn Spt & Equip Replacement	3.1	5.0	3.7(.3)	5.7
5835332 - Lake City AAP: SPT - Pdn Spt & Equip Replacement	2.0	2.1	3.0	3.0
5835333 - Iowa AAP: SPT - Pdn Spt & Equip Replacement	1.6	2.1	2.9(1.0)	3.1
5835342 - Scranton AAP: SPT - Pdn Spt & Equip Replacement	1.9	1.6	3.2	1.8
5835201 - Inactive: SPT - Energy Conservation and Management		1.1		
5845625 - Sunflower AAP: SPT - Pdn Spt & Equip Replacement				1.0
PROJECTS UNDER \$900,000 EACH	3.0	2.5	1.0	1.1
<b>SUBTOTAL PRODUCTION SPT &amp; EQUIP REPLACEMENT</b>	<b>32.0</b>	<b>37.8</b>	<b>33.6(3.7)</b>	<b>31.3</b>
<u>Initial Production Facilities</u>				
5810062 - Commercial: IPP - 105mm XM833 KE Core and Metal Parts	3.40			
5810201 - Pine Bluff Arsenal: IPP - 155mm XM825 Smoke LAP	1.60			
5810377 - Pine Bluff Ars: IPP - 155mm M687 Binary Production Facility	20.0			
5812182 - Commercial: IPP - VIPER Metal Parts and LAP	3.34			
5812855 - X-Facility: Comm - 25mm Bushmaster Production Equipment	5.54			

PROCUREMENT OF AMMUNITION, ARMY  
PRODUCTION BASE SUPPORT  
(\$ in Millions)

<u>Projects</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>
<u>Initial Production Facilities</u> , Continued				
5820019 - Commercial: IPF - DIVADS Ammo Facility	47.50			
5820048 - Kansas AAP: Comm - IPF --AntiArmor Cluster Munition LAP/ Metal Parts	21.96			
5820050 - Honeywell Inc: IPF - Tactical Munitions Dispenser	6.20			
5820069 - Commercial: IPF - Mine FASCAM - Battery HED	4.00			
5820071 - Commercial: IPF - GATOR Barricade	.16			
5820083 - Commercial: IPF - 155mm XM825 WP Smoke Metal Parts	4.10			
5822266 - Lake City AAP: IPF - 5.56mm SAW Conversion Bell/Tracer	1.50			
5822326 - Commercial: IPF - VIPER Production Facilities	11.00			
5823065 - Commercial: IPF - 40mm M430 HEDP	5.40			
5830020 - Commercial: IPF - Family of Scatterable Mines (FASCAM) Metal Parts		14.06		
5830025 - Commercial: IPF - 105/120mm XM833/829-APPSDS-T Core		17.01		
5830026 - Iowa AAP: IPF - 120mm Projectile LAP		9.85		
5830027 - Commercial: IPF - 120 Combustible Cartridge Case Facility		5.83		
5830037 - Pine Bluff Arsenal: IPF - LSAI Red Phosphorus Grenade LAP		2.31		
5830039 - Commercial: IPF - 105/120mm HEAT Metal Parts		27.09		
5830061 - Commercial: IPF - 120mm Stub Base		19.90		

PROCUREMENT OF AMMUNITION, ARMY  
PRODUCTION BASE SUPPORT  
(\$ in Millions)

<u>Projects</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>
<u>Initial Production Facilities, Continued</u>				
5830079 - Commercial: IPP QL Production Facility for Bigeye Bomb	9.99			
5832200 - Radford AAP: IPP - 2.75" MK66 Rocket Grain Facility	1.72			
5832206 - X-Facility: IPP - 105/120mm KE Metal Parts	39.50			
5832229 - Radford AAP: IPP - 120mm Tank Ammunition Propellant Facility	1.91 (.6)			
5833602 - Milan AAP: IPP - 60/81mm Ignition Cartridge LAP	2.30			
5836871 - Iowa AAP: IPP - FASCAM LAP (GATOR)	3.26			
5840051 - Commercial: IPP - Combined Effects Munitions Metal Parts	13.34			
5840054 - Milan AAP: IPP - Combined Effects Munitions LAP	18.21			
5840063 - Pine Bluff Arsenal: IPP - Bigeye Bomb (Binary) LAP Facility	33.99			
5840070 - Indianshead MWS: IPP - Low Vulnerability Propellant for 105mm/M456/M490	2.09			
5840074 - Commercial: IPP - Bigeye Bomb Metal Parts	9.48			
5840094 - Commercial: IPP - Fuze FMU 139/B	7.42			
5842285 - X-Facility: IPP - HAG Grenade LAP	.93			
5842928 - X-Facility: IPP - FAK II Metal Parts/LAP	11.05			
PROJECTS UNDER \$900,000 EACH	.47			
<b>SUBTOTAL INITIAL PRODUCTION FACILITIES (IPP)</b>	<b>33.88</b>	<b>101.82</b>	<b>155.20 (.6)</b>	<b>96.51</b>

PROCUREMENT OF AMMUNITION, ARMY  
PRODUCTION BASE SUPPORT  
(\$ in Millions)

<u>Projects</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>
<u>Modernization</u>				
5810280 - Pine Bluff Ars: MOD - Automate M18 Grenade Fill and Press Facility	1.02			
5810283 - Pine Bluff Ars: MOD - Modernization of Smoke Mix Facility	1.61			
5812049 - Radford AAP: MOD - 155mm RAP Extruded Grain Production Facility	4.84			
5812084 - Indiana AAP: MOD - Black Powder Mtg Plant	2.11			
5812117 - Indiana AAP: MOD - Prop Charge Igniter Preparation	2.65			
5812160 - Radford AAP: MOD - Restore "C" Line Nitrocellulose	2.39			
5812178 - Scranton AAP: MOD - Major Caliber Projectile Production Equip	.94			
5813192 - Scranton AAP: MOD - Production Equipment for Med/Lg Cal/Mpts	1.36			
5813180 - Iowa AAP: MOD/SPT - Container Distribution Facility	2.34			
5813184 - Commercial: MOD - 155mm M549 RAP/105mm TPDS Production Equip	1.35			
5820285 - Pine Bluff Ars: MOD - Grenade Hexachlorethane (HC) Smoke M8 LAP	1.47			
5822052 - Holston AAP: MOD - Comp B line 1 Improvements	7.53			
5822138 - Kansas AAP: MOD - M42/46 Grenade In-Process Storage Igloos	1.15			
5822144 - Lone Star/Kansas AAP: MOD - Tape Stiffener Assay Machine for M42/46 Grenade	2.73			
5822145 - Lake City AAP: MOD - SCAMP (Small Caliber Ammunition Modernisation Program) Line 1 Spare Parts	1.23			

PROCUREMENT OF AMMUNITION, ARMY  
PRODUCTION BASE SUPPORT  
(\$ in Millions)

<u>Projects</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>
<u>Modernization, Continued</u>				
5822317 - Radford AAP: MOD - Ammonia Oxidation Plant Modifications	5.36			
5822380 - Sunflower AAP: MOD - Restore 300 TID Ammonia Oxidation Plant	1.10			
5823089 - Lansdowne: Comm - 5 inch/54 Navy Projectile Manufacturing Facility (PH II)	6.87			
5823106 - Lone Star AAP: MOD - Container Distribution Facility	2.49			
5823186 - Commercial: MOD - Active Munitions Metal Parts Facilities (Ph I)	5.68			
5823593 - Iowa AAP: MOD - Rehabilitate Main Heating Plant	17.14			
5832066 - Indiana AAP: MOD - Power Tie Line	3.60 (2.6)			
5832109 - Milan AAP: MOD - Rehabilitation of K-10 Boilers	5.60 (5.5)			
5832127 - Volunteer AAP: MOD - Modification to TNT Area	8.15			
5832201 - Lake City AAP: MOD - SCAMP Line 3, fill voids	4.05			
5832202 - Lake City AAP: MOD - SCAMP Line 4 & 5 fill voids	8.09			
5832210 - Kansas AAP: MOD - Grenade M42/66 Auto Insertion	4.83			
5832250 - Multiple Sites: MOD - Pyrotechnic Temperature and Humidity Control for Production Facilities	3.08			
5832260 - Multiple Sites: MOD - Pyrotechnic Interim Safety Enhancements	1.91			
5832380 - Sunflower AAP: MOD - Restore 300 Ton/Day Ammonia Oxidation	4.15 (3.0)			
5833107 - Louisiana AAP: MOD - Container Distribution Facility	3.14 (3.1)			

PROCUREMENT OF AMMUNITION, ARMY  
PRODUCTION BASE SUPPORT  
 (\$ in Millions)

<u>Projects</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>
<u>Modernization, Continued</u>				
5833176 - Commercial: MOD - Fuse Production/Tool Room (KDI)	3.02			
5833178 - Commercial: MOD - Fuse Production/Tool Room (Hamilton)	2.03			
5833190 - Commercial: MOD - Improved Metal Parts Productivity - Phase II	12.07			
5833215 - Commercial: MOD - 8" M509 Threaded Base	8.11			
5833225 - Commercial: MOD - 30mm Production Equipment	5.49			
5833605 - Kansas AAP: MOD - Consolidated Plant Operations Center	7.35 (7.2)			
5833906 - Holston AAP: MOD - Nitric Acid Support for RBX/RDX Production	3.14			
5841616 - Multiple Sites: MOD - 16 inch Projectile Metal Parts/LAP	20.00			
5842222 - Iowa AAP: MOD - M549 RAP Inspection	6.76			
5842390 - Sunflower AAP: MOD - Continuous Nitrocellulose Mft Unit #1	45.98			
5843906 - Holston AAP: MOD - Nitric Acid Facility	1.20			
PROJECT UNDER \$900,000 EACH	1.96	.6		
<b>SUBTOTAL MODERNIZATION</b>	<b>22.57</b>	<b>53.35</b>	<b>87.81(21.4)</b>	<b>73.96</b>
<u>EXPANSION</u>				
5830048 - Commercial: EXP - AntiArmor Cluster Munitions Metal Parts	10.67			
5830050 - Commercial: EXP - Tactical Munitions Dispenser Metal Parts	1.91			
5833142 - Mississippi AAP: EXP - 155mm M483 ICW Production Complex	189.1	23.5	15.8	

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PROCUREMENT OF AMMUNITION, ARMY  
PRODUCTION BASE SUPPORT  
(\$ in Millions)

<u>Projects</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>
<u>EXPANSION, Continued</u>				
5833197 - Commercial: EXP - M734 Hybrid Amplifier Facility			4.46	
XXXXXX - X-Facility: Classified Program		43.90		7.30
5840084 - Radford AAP: EXP - Stick Propellant for 155mm				2.60
5842041 - Lone Star AAP: EXP - FASCAM LAP (MDPMS)				4.32
5842207 - Commercial: EXP - 105/120mm KE Training Metal Parts				25.26
5842341 - Kansas AAP: EXP - AntiArmor Cluster Munitions LAP				2.91
5842297 - Iowa AAP: EXP - 120mm Press Load and Inspection				3.20
5834164 - Commercial: EXP - 105/120mm KE Core				40.18
5843165 - Commercial: EXP - 105/120mm HEAT Tactical/Training Metal Parts				20.18
5843192 - Commercial: EXP - 120mm Stub Base				10.13
5843194 - Commercial: EXP - 60mm Horseshoe Increment Container				1.48
5843194 - Commercial: EXP - 81mm Horseshoe Increment Container				1.36
5843212 - Commercial: EXP - Combustible Cartridge Case				6.26
Omnibus Engineer-Process Equipment Design Construction Design	21.52	24.06	35.46	33.87
PROJECTS UNDER \$900,000 EACH	.39	.86	2.96	
<b>SUBTOTAL EXPANSION</b>	<b>211.01</b>	<b>48.42</b>	<b>115.16</b>	<b>159.05</b>

PROCUREMENT OF AMMUNITION, ARMY  
PRODUCTION BASE SUPPORT  
(\\$ in Millions)

P-1 Line Item:		FY81	FY82	FY83	FY84
<u>Projects</u>					
5828450 - ARRCOM:	Layaway and/or Redistribution of Govt-Owned Equip in Govt-Owned Plants (Omnibus)	10.9	24.6	11.6	12.2
5829589 - ARRCOM:	Layaway and/or Redistribution of Govt-Owned Equip	5.7	5.1	5.6	5.5
SUBTOTAL LAYAWAY OF INDUSTRIAL FACILITIES		16.6	29.7	17.2	17.7
<u>P-1 Line Item: Manufacturing Methods and Technology</u>					
<u>Projects:</u>					
5842062 - MM&T:	Auto Mfg Sys f/Mortar Increment Containers	2.42	2.81		
5824189 - MM&T:	Hi-Frag Steel Prod Process		1.70		
5824309 - MM&T:	Process Development for 120mm Tank Ammo	3.53	2.96		
5824454 - MM&T:	Auto Insp Device Explosive Charge Shell (AIDECS)	1.89	1.52		
5834061 - MM&T:	Nitroguanidine Process Optimization	.91	1.15	.94	
5834198 - MM&T:	Auto Loading & Assembly of Prop Charge with Stick Propellant			1.01	
5834267 - MM&T:	Continuous Process for Granular Composition			1.38	
5834273 - MM&T:	Auto Production of Stick Propellant			.98	
5834287 - MM&T:	Conservation of Energy at Army Ammunition Plants	1.14	1.37	1.90	1.59
5834489 - MM&T:	Advanced Pollution Abatement for DARCOM Facilities		1.36	1.23	
5834500 - MM&T:	Eval Undue Capabilities for Loading Explosives			1.20	
5834548 - MM&T:	Safety Improvement of Pyrotechnic Mix			1.19	
5844452 - MM&T:	Reprocessing Demilled Explosives				.96

**PROCUREMENT OF AMMUNITION, ARMY**

**Section 7**

**Analysis of Unobligated Balances**

**4-44 February 1982**

PROCUREMENT OF AMMUNITION, ARMY  
PRODUCTION BASE SUPPORT  
 (\$ in Millions)

<u>Projects</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>
<u>Manufacturing Methods and Technology, Continued</u>				
5844528 - MMET: Rotary Forging of DU Penetrators				1.00
5844531 - MMET: Prototype Production of Multibase Stick Propellant				.99
5844532 - MMET: SAWS Bullet Conversion of Modernized Equipment				1.80
<b>PROJECTS UNDER \$900,000</b>	<b>10.81</b>	<b>17.63</b>	<b>14.57</b>	<b>19.16</b>
<b>SUBTOTAL MANUFACTURING METHODS AND TECHNOLOGY</b>	<b>20.70</b>	<b>30.50</b>	<b>24.40</b>	<b>25.50</b>
<u>P-1 Line Item: Military Adaption of Commercial Items</u>				
PROJECTS UNDER \$900,000 EACH		.8		
<b>SUBTOTAL MILITARY ADATION OF COMMERCIAL ITEMS</b>		<b>.8</b>		
<u>P-1 Line Item: Depot Maintenance Plant Equipment</u>				
Ammunition Peculiar Equipment in Support of Worldwide Depot		9.2	10.3	
<b>SUBTOTAL DEPOT MAINTENANCE PLANT EQUIPMENT</b>		<b>9.2</b>	<b>10.3</b>	
<b>TOTAL AMMUNITION PRODUCTION BASE SUPPORT</b>	<b>346.8</b>	<b>311.9</b>	<b>433.4</b>	<b>404.0</b>

**PROCUREMENT OF AMMUNITION, ARMY**

**Analysis of Unobligated Balance - FY 1983 Program and Prior Programs**

<u>Category</u>	<u>Summary by Category</u>		
	<u>Dollars (Millions)</u>	<u>% of Total Unobligated</u>	
1. Reserved to Support Contracts	428.1	67.3	
2. Engineering Changes	92.2	14.5	
3. Other	115.8	18.2	
Total FY 1983 Unobligated Balance	636.1	100.0%	

**Explanation by Category**

It is predicted that the above amounts will remain unobligated at the end of FY 1983. The \$636.1 million unobligated balance is applicable to the FY 1982 and FY 1983 programs. Of this amount \$145.8 million is the estimated unobligated balance of the FY 1982 program after 24 months of execution and \$490.3 is the estimated unobligated balance of the FY 1983 program after 12 months of execution. Reasons for the unobligated balances have been grouped into three general categories and detail is provided below. These unobligated amounts will therefore be required in subsequent fiscal years to complete the FY 1982 and FY 1983 procurement programs.

1. Reserved to Support Contracts - \$428.1 million.
  - a. Held pending award of firm contracts as opposed to letter orders.
  - b. Amounts reserved for incentive contract payments.
  - c. Amounts held to support Product and Component Improvement programs; modification for retrofit during production; modifications ordered by customers.
  - d. Contractor claims reserves to cover potential liabilities for contracts containing escalation clauses for labor or material cost increases, and price redeterminations.
  - e. Contract close-out costs; packing, crating, handling, packaging, and loading charges.
  - f. Government-furnished equipment breakout procurements; federal excise tax and sales tax payments; preparation of manuals and technical data; and reserve for completion of construction elements of production base support facilities projects.
  - g. Delay due to design or testing difficulties.
  - h. Award protests.
  - i. Insufficient procurement detail involving reimbursable orders.
  - j. Delay pending development of adequate competitive procurement or technical data package.

**PROCUREMENT OF AMMUNITION, ARMY (Continued)**

- k. Items released to Army by other customers too late to permit obligation during FY 1983.
- 2. Engineering Changes - \$92.2 million.
  - a. Engineering costs in support of production (obligated only as expenses are incurred).
  - b. Validated engineering change orders to be incorporated into the current manufacturing process.
  - c. Engineering changes as a result of acceptance testing, destructive and proving ground tests.
  - d. Amounts reserved to support engineering change proposals and value engineering proposals.
- 3. Other - \$115.8 million.
  - a. Changes to the previously planned method of procurement (i.e., competitive in lieu of sole source).
  - b. Extension to bid opening dates.
  - c. Additional time required to complete audits of cost data and to obtain contractor cost data.
  - d. Unfavorable pre-award surveys and extended negotiations.
  - e. Held pending validation of production capability of low bidder.
  - f. Held pending attainment a satisfactory production rate prior to awarding additional work.

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